

**NORTH CAROLINA DIVISION OF  
AIR QUALITY**

# Application Review

**Issue Date: DRAFT**

**Region:** Fayetteville Regional Office  
**County:** Cumberland  
**NC Facility ID:** 2600102  
**Inspector's Name:** Jeffrey D. Cole  
**Date of Last Inspection:** 02/13/2018  
**Compliance Code:** 3 / Compliance - inspection

<p style="text-align: center;"><b>Facility Data</b></p> <p><b>Applicant (Facility's Name):</b> HQ XVIII ABN Corps &amp; Fort Bragg</p> <p><b>Facility Address:</b>  HQ XVIII ABN Corps &amp; Fort Bragg  Bldg 3-1137  Fort Bragg, NC 28310</p> <p><b>SIC:</b> 9711 / National Security  <b>NAICS:</b> 92811 / National Security</p> <p><b>Facility Classification: Before:</b> Title V <b>After:</b> Title V  <b>Fee Classification: Before:</b> Title V <b>After:</b> Title V</p>	<p style="text-align: center;"><b>Permit Applicability (this application only)</b></p> <p><b>SIP:</b> 15A NCAC 02D .0503, .0516, .0521  <b>NSPS:</b> 15A NCAC 02D .0524, Subpart IIII  <b>NESHAP:</b> 15A NCAC 02D .1111, Subpart DDDDD, Subpart ZZZZ  <b>PSD:</b> N/A  <b>PSD Avoidance:</b> N/A  <b>NC Toxics:</b> N/A  <b>112(r):</b> N/A  <b>Other:</b> N/A</p>
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Contact Data			Application Data
<p style="text-align: center;"><b>Facility Contact</b></p> <p>Gary Cullen  Air Program Manager  (910) 432-8464  IMBG-PWE-C  Fort Bragg, NC  28310+5000</p>	<p style="text-align: center;"><b>Authorized Contact</b></p> <p>Monica Stephenson  Director, Directorate of  Public Works  (910) 396-4009  IMBG-PW  Fort Bragg, NC  28310+5000</p>	<p style="text-align: center;"><b>Technical Contact</b></p> <p>Gary Cullen  Air Program Manager  (910) 432-8464  IMBG-PWE-C  Fort Bragg, NC  28310+5000</p>	<p><b>Application Number:</b> 2600102.17A  <b>Date Received:</b> 10/27/2017  <b>Application Type:</b> Modification  <b>Application Schedule:</b> TV-Significant  <b>Existing Permit Data</b>  <b>Existing Permit Number:</b> 04379/T43  <b>Existing Permit Issue Date:</b> 04/25/2017  <b>Existing Permit Expiration Date:</b> 03/31/2022</p>

Total Actual emissions in TONS/YEAR:							
CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2016	1.62	97.35	38.24	58.08	7.32	4.88	1.77 [Toluene]
2015	1.28	86.25	40.00	55.52	7.14	5.09	1.86 [Toluene]
2014	1.34	93.50	44.35	61.32	6.78	5.02	1.87 [Toluene]
2013	1.41	85.86	44.56	58.00	6.57	5.82	2.02 [Toluene]
2012	1.66	59.46	42.77	35.54	5.87	4.64	2.02 [Toluene]

<p><b>Review Engineer:</b> Kevin Godwin</p> <p><b>Review Engineer's Signature:</b> _____ <b>Date:</b> _____</p>	<p style="text-align: center;"><b>Comments / Recommendations:</b></p> <p><b>Issue</b> 04379/T44  <b>Permit Issue Date:</b> DRAFT  <b>Permit Expiration Date:</b> 03/31/2022</p>
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## I. Introduction

- A. According to Application No. 2600102.17A, Fort Bragg Army Post (Ft. Bragg) is home to both the 82<sup>nd</sup> Airborne Division and the XVIII Airborne Corps Headquarters. The existing permit covers sources consisting of boilers, generators, paint booths, engine test stands, and a cogeneration turbine. Additionally, there are a number of insignificant activities, including parts washers, abrasive blasting, emergency generators, incinerators, hot water heaters, liquid storage tanks, and woodworking operations.
- B. Ft. Bragg requests that the current permit be modified to include:
1. installation and operation of six (6) natural gas-fired boilers (ID Nos. ES-914B, ES-915B, ES-916B, ES-917B, ES-918B, and ES919B, 2.0, 2.0, 2.07, 1.75, 1.75 and 2.06 million Btu per hour heat input, respectively) added to the body of the permit;
  2. installation and operation of thirty-three (33) natural gas-fired boilers and water heaters less than 1.6 million Btu per hour to produce hot water placed on the insignificant activity list;
  3. installation and operation of three (3) diesel-fired fire pump engines (ID Nos. ES-22FP019, ES-23FPO19, and ES-25FPW3396, 117 kW, 64 kW, and 134 kW, respectively) Section 2.1 K;
  4. removal of thirty-eight (38) small boilers, forty-eight (48) generators, two (2) fire pump engines, one paint bench, and one woodworking operation, Section 2.1 L, 2.2 F. and 2.2 K., and
  5. various administrative amendments.
- C. Because this modification does involve a significant change to existing monitoring and recordkeeping requirements, it is considered a significant modification under 15A NCAC 02Q .0516. The applicant has requested that the application be processed under 15A NCAC 02Q .0501(d)(1).

## II. Application Chronology

Application received	October 27, 2017
Draft to Applicant and Regional Office	April 2, 2018
Draft to Supervisor	April 26, 2018
Draft to public notice and EPA	XX

## III. Changes to Existing Permit

The following table provides a summary of changes made with this permit revision 04379T44.

Page No.	Section	Description of Change
Cover letter	N/A	Amended application type; permit revision numbers, dates and included updated letterhead.
1	Permit cover page	Amended permit revision numbers and all dates.
N/A	All, Header	Updated permit revision number.
	Insignificant Activities List	Included <b>2D .1109 Case-By-Case MACT MACT DDDDD</b> designation for sources (ID Nos. IES-40B and 41B), and  Moved source (ID No. ES-903B) from Permitted Equipment list to Insignificant Activity List.
3	Table of Permitted Sources	Removed No. 2 fuel oil as secondary fuel for source (ID No. ES-779B),  Included new sources (ID Nos. ES-914B, ES-915B, ES-916B, ES-917B, ES-918B, ES-919B, ES-22FPO19, ES23FPO19, and ES-25FPW3396),

Page No.	Section	Description of Change
		<p>For sources (ID Nos. ES-842B, ES-894B, ES-895B, ES-908B, ES-909B, and ES-901B) changed designation to <b>2D .1109 Case-By-Case MACT MACT DDDDD</b>,</p> <p>For sources (ID Nos. ES-191GI and ES-192GI) included language “with Selective Catalytic Reduction,”</p> <p>For source (ID No. ES-34B) changed description to Natural Gas Heat Recovery Steam Generator (61.2 million Btu per hour maximum heat input),</p> <p>For source (ID No. 01TP), included MACT DDDDD designation,</p> <p>Removed source (ID No. ES-29B), and</p> <p>Removed sources per Application Form A2.</p>
25	2.1 E.	Removed source (ID No. ES-29B).
41	2.1 K.	Included sources (ID Nos. ES-22FP019, ES-23FP019, and ES-25FPW3396).
75	2.2 L.	Moved sources (ID Nos. ES-842B, ES-894B, ES-895B, ES-908B, ES-909B, and ES-910B) from Section 2.2 M. to Section 2.2 L.
75	2.2 L.	Changed sources (ID No. ES-34B, ES-35B, and ES-TEMPBOIL to Natural Gas with Oil Backup Only “unit designated to burn gas 1 category.
75	2.2 L.	For source (ID No. ES-34B), removed MACT language for liquid fuel.
81	2.2 M.	<p>Included source (ID No. ES-01TP) in Section 2.2 M.</p> <p>Moved sources (ID Nos. ES-911B, ES-912B, and ES-913B) from insignificant activity list to Section 2.2 M.</p> <p>Included new sources (ID Nos. ES-914B, ES-915B, ES-916B, ES-917B, ES-918B, ES-919B).</p>
		Changed source ID to (ID No. ES-24FPT6202).
42, 62, and 73	2.1 L, 2.2 F., and 2.2 K.	Removed sources per Application Form A2.
83	3.0	Included most recent General Conditions version 5.2 04/03/2018.

Attachment 1 of this document includes a PDF of the Application A2 Form identifying sources being removed with this modification.

#### IV. Statement of Compliance

DAQ has reviewed the facility’s compliance status. The facility was last inspected on February 13, 2018 by Mr. Jeffery Cole of the Fayetteville Regional Office (FRO). According to the most recent inspection report found in IBEAM, the facility appeared to be operating in full compliance with all applicable requirements. Regarding the 5-year compliance history, the report notes that a Notice of Deficiency (NOD) was issued on August 25, 2015 for a late NESHAP Subpart ZZZZ notification.

## V. Description of Administrative Changes

The following table provides a summary of the requested administrative changes:

ID No.	Permit Section	Change
ES-903B	Section 1 Section 2.2 M.	A 400,000 Btu/hr N.G.-fired boiler was installed instead of the Permitted 2.0 million Btu/hr, Re-designate boiler into IES-00B insignificant activity grouping, Remove MACT applicability
ES-842B, ES-894B, ES-895B, ES-908B, ES-909B, ES-910B	Section 1 Section 2.2 M	Boilers initially started up before June 4, 2010, considered existing for MACT applicability
ES-01TP	Section 2.2 S.	Tanker purge/cleaning operation that involves hot water supplied by a 5.0 million Btu/hr propane water heater. This process heater was installed after June 2010 and is subject to the boiler MACT.
ES-34B	Section 2.2 L.3.	Change emission source description to “Natural Gas Heat Recovery Steam Generator (61.2 million Btu/hr maximum heat input).” Please note that the heat recovery steam generator never had the capability to burn diesel or No. 2 fuel oil.
ES-34B, ES-35B, ES-Tempboil	Section 2.2 L.2.a.	Change ES-34B, ES-35B, and ES-Tempboil to Natural Gas with oil backup only “unit designed to burn gas 1 category. Remove language identifying ES-34B, ES-35B, and ES-Tempboil in L.2.a.
IES-911B, IES-912B, IES913B	Insignificant Activity Table	These units are subject to the boiler MACT. Please transfer these sources to the permitted equipment list and add the units to Section 2.2 M.
ES-842B, ES-894B, ES-895B, ES-908B, ES-909B, ES-910B	Section 2.2 L.	Add the boilers to the Case-by-Case table. Remove the boilers from the MACT list in Section 2.2 M.
ES-24ATF01		Change ID No. to ES-24FPT6202
ES-191GI, ES-192G		Change emission source description to “diesel-fired emergency generator (655 kW maximum output) with Selective Catalytic Reduction.”

## VI. Regulatory Review – Specific Emission Source Limitations

- A. Existing Specific Emission Source Limitations are not affected by this modification. The proposed new boilers will be subject to the requirements of 15A NCAC 02D .0503, .0516, and .0521. However, because the sources only fire natural gas, no monitoring, recordkeeping, or reporting is required to demonstrate compliance with the applicable regulations.
- B. 15A NCAC 02D .0503 “Particulates from Fuel Burning Indirect Heat Exchangers” – This regulation applies to the new boilers (ID Nos. ES-914B, ES-915B, ES-916B, ES-917B, ES-918B, and ES-919B). For the purpose of this Rule, the maximum heat input shall be the total heat content of all fuels which are burned in a fuel burning indirect heat exchanger, of which the combustion products are emitted through a stack or stacks. The sum of maximum heat input of all fuel burning indirect heat exchangers at a plant site which are in operation, under construction, or permitted pursuant to 15A NCAC 2Q, shall be considered as the total heat input for the purpose of determining the allowable emission limit for particulate matter for each fuel burning indirect heat exchanger. The allowable limit is calculated by the following equation:

$$E = 1.090 * Q^{-0.2594} \quad \text{where, } E = \text{allowable emissions in lb/million Btu}$$

$$Q = \text{maximum heat input in million Btu/hr}$$

- For Permit Revision T40, Q = 1,091.44 million Btu/hr
- For Permit Revision T41, add 20 small boilers,

add ES906B = 4.003 million Btu/hr, and  
 ES907B = 2.0 million Btu/hr  
 remove ES-766B = 0.3 million Btu/hr, and  
 ES-826B = 1.05 million Btu/hr

- For Permit Revision T42, add ES-908B = 4.2 million Btu/hr,  
 ES-909B = 3.2 million Btu/hr, and  
 ES-910B = 2.7 million Btu/hr  
 add 19 water heaters < 1.6 million Btu/hr  
 remove 18 small boilers
- For Permit Revision T43, no changes
- For Permit Revision T44, add ES-914B = 2.0 million Btu/hr  
 ES-915B = 2.0 million Btu/hr  
 ES-916B = 2.07 million Btu/hr  
 ES-917B = 1.75 million Btu/hr  
 ES-918B = 1.75 million Btu/hr  
 ES-919B = 2.06 million Btu/hr  
 add 33 water heaters < 1.6 million Btu/hr  
 remove 38 small boilers

thus,  $Q = 1,091.44 + 4.003 + 2.0 + 4.2 + 3.2 + 2.7 + 2.0 + 2.0 + 2.07 + 1.75 + 1.75 + 2.06 =$   
 1,119.17 million Btu/hr

For these sources E calculates to 0.18 lb/million Btu. Natural gas combustion in these sources will not cause the limit to be exceeded. Therefore, compliance is demonstrated.

- C. 15A NCAC 02D .0516 “Sulfur Dioxide Emissions from Combustion Sources” - Emission of sulfur dioxide from any source of combustion that is discharged from any vent, stack, or chimney shall not exceed 2.3 pounds of sulfur dioxide per million BTU input. Natural gas combustion in these sources will not cause the limit to be exceeded. Therefore, compliance is demonstrated.
- D. 15A NCAC 02D .0521 “Control of Visible Emissions” - For sources manufactured after July 1, 1971, visible emissions shall not be more than 20 percent opacity when averaged over a six-minute period. However, except for sources required to comply with Paragraph (g) of this Rule, six-minute averaging periods may exceed 20 percent opacity if:
  - (1) No six-minute period exceeds 87 percent opacity;
  - (2) No more than one six-minute period exceeds 20 percent opacity in any hour; and
  - (3) No more than four six-minute periods exceed 20 percent opacity in any 24-hour period.
 Compliance is expected when firing natural gas in these sources.

## VII. Regulatory Review – Multiple Emission Source Limitations

- A. 15A NCAC 02D .0524 “New Source Performance Standards” (NSPS) – Subpart Dc – This subpart regulates sulfur dioxide and particulate matter emissions from small steam generating units with a design heat input capacity of greater than 10 million Btu/hour but no more than 100 million Btu/hr. The boilers in this application are all less than 10 million Btu/hour design heat input rate. Thus, this Subpart does not apply.
- B. 15A NCAC 02D .0524 “New Source Performance Standards” (NSPS) – Subpart IIII – This Subpart applies to owners and operators of new, modified, and reconstructed stationary Compression Ignition Reciprocating Internal Combustion Engines (CI RICE). The new fire pump engines (ID Nos. ES-22FPO19, ES-23FPO19, and ES-25FPW3396) were manufactured in 2016 and the engine displacement is less than 30 L/cylinder. The engines must comply with emission standards for new non-road CI engines in §60.4205(c)(emergency). According to the application, the engines will be certified to the emission

requirements in §60.4202 (emergency) per §60.4211(c). The new engines will be included in existing permit condition 2.2 K., which references the requirements under Subpart IIII. Compliance is expected.

- C. 15A NCAC 02D .0530 “Prevention of Significant Deterioration” (PSD) – Ft. Bragg is classified as a major stationary source under PSD regulations, with the potential to emit criteria pollutants greater than 250 tons per year. According to the application, projects are frequently initiated and funded separately by various tenants under ownership of Ft. Bragg. While multiple projects are combined into this application, none of these projects are related or interdependent.

These sources are new to Ft. Bragg. For the boilers, potential criteria pollutant emissions are calculated using AP-42, Chapter 1.4 factors and 8,760 hours per year. For the RICE, potential criteria pollutant emissions are calculated using AP-42, Chapter 3.3 factors and 500 hours per year.

Example calculation (ES-917B, N.G.-fired, 2.07 million Btu/hr):

$$\text{NOx} = (0.097 \text{ lb/million Btu}) * (2.07 \text{ million Btu/hr})[8760 \text{ hr/year}][1 \text{ ton}/2000 \text{ lb}] = 0.88 \text{ tons/year}$$

The following table provides a summary of Criteria Pollutant and Greenhouse Gas emissions from all projects combined.

<b>Pollutant</b>	<b>Potential Emissions (tons per year)</b>	<b>PSD Significant Emission Rate (SER)</b>
Carbon Dioxide	21,143	75,000
Methane	0.47	
Nitrous Oxide	0.06	
Carbon Monoxide	15.14	100
Nitrogen Oxide	21.31	40
Particulate Matter	1.54	25
PM-10	1.54	15
PM-2.5	1.54	10
SO <sub>2</sub>	0.31	40
Volatile Organic Compounds	1.32	40

Because the summation of potential emissions from all projects combined does not exceed the PSD Significant Emissions Rate (SER), PSD review is not required.

The PSD minor baseline dates for PM-10, SO<sub>2</sub> and NOx have been triggered for Cumberland County. For PSD increment tracking purposes, PM-10 emissions from this modification are increased by 0.35 pounds per hour, SO<sub>2</sub> emissions from this modification are increased by 0.07 pounds per hour, and NOx emissions from this modification are increased by 4.87 pounds per hour.

- D. 15A NCAC 02D .0614 “Compliance Assurance Monitoring” - The CAM rule applies to pollutant specific emission units at Title V facilities that are pre-control major sources and use a control device to comply with an emission limit. The CAM rule does not apply to units that are identified in this application. Therefore, CAM does not apply.
- E. 15A NCAC 02D .1111 “Maximum Achievable Control Technology (MACT)” – Subpart ZZZZ – This Subpart applies to existing, new, or reconstructed stationary RICE located at major and area sources of hazardous air pollutants (HAP) emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand. The new diesel-fired units (ID Nos. ES-22 FPO19, ES-23FPO19, and ES25FPW3396) < 500 hp and constructed after June 12, 2006 are subject to this Subpart. Condition 2.2 F.3. in the existing permit references the requirements under Subpart ZZZZ. For these units, compliance with Subpart ZZZZ is demonstrated by complying with NSPS Subpart IIII.

- F. 15A NCAC 02D .1111 “Maximum Achievable Control Technology (MACT)” – Subpart DDDDD – This Subpart applies to new and existing boilers and process heaters located at a major source of HAP emissions. Ft. Bragg is classified as a major HAP source. Compliance for new sources is required upon start-up. New sources are those constructed after June 4, 2010. The new units (ID Nos. ES-914B, ES-915B, ES-916B, ES-917B, ES-918B, and ES-919B) will be placed under existing condition 2.2 M. which references the requirements under this Subpart. New small gas boilers are required to perform a tune-up within 5 years of initial start-up and every 5 years thereafter. Compliance demonstrations will be completed according to work practices in 40 CFR 63.7510(g).

Units meeting the definition of “hot water heater” under Subpart DDDDD are exempt from regulation under that rule per 40 CFR 63.7491(d).

Hot water heater means a closed vessel with a capacity of no more than 120 U.S. gallons in which water is heated by combustion of gaseous fuel and is withdrawn for use external to the vessel. Hot water boilers combusting gaseous fuel with a heat capacity of less than 1.6 million Btu/hr are included in this definition. The 120 U.S. gallon capacity threshold to be considered a hot water heater is independent of the 1.6 million Btu/hr heat input capacity threshold for hot water boilers.

Ft. Bragg is installing a number of external combustion sources that are considered new hot water heaters and are categorically exempt from Subpart DDDDD. Each of these units qualify as an insignificant activity under 15A NCAC 02Q .0503(8) as potential emissions are calculated to be less than 5 tons per year for criteria pollutants and less than 1,000 pounds per year of total HAP. According to the application, the majority of these units are replacing existing units, but are considered new additions since they have a larger rated heat input capacity. Ft. Bragg requests that these sources be grouped together under a single ID No. IES-00B on the insignificant activity list.

- G. 15A NCAC 02D .1100 “Control of Toxic Air Pollutants” – North Carolina Division of Air Quality's toxic air pollutant (TAP) program is a "risk-based" regulatory program designed to protect the public health.

General Statute G.S. 143-215.107(a) was approved on June 28, 2012 and this Act exempts from State Air Toxics those sources of emissions that are subject to certain Federal emissions requirements under 40 CFR Part 61 (NESHAP), Part 63 (NESHAP), or Case-by-Case MACT pursuant to 42 U.S.C. §7412(j). This statute was placed into the North Carolina State Air Toxics regulations on May 1, 2014 under Regulation 15A NCAC 2Q .0702(a)(27).

Ft. Bragg was required to submit a state-only TAP demonstration no later than January 13, 2012. The demonstration was required to include all permitted sources up through revision T35 with units operating at potential-to-emit rates. The results demonstrated that the modeled emission rates were in compliance with acceptable ambient levels (AAL) listed in 15A NCAC 02D .1104. No operating limitations were necessary to comply with the AAL at that time.

The following modifications have occurred at this facility since revision T35:

- T36:     Seven natural gas-fired water heaters exempted from air toxics per 15A NCAC 2Q .702(a)(2)  
            Two natural gas-fired humidifiers exempted from air toxics per 15A NCAC 2Q .702(a)(8)  
            Thirty-nine natural gas-fired boilers/heaters (ES-601B through 639B) with a total heat input of 16.01 mmBtu/hour.  
            Added thirteen Diesel fuel-fired emergency generators each less than 200 kW.  
            Added one Diesel fuel-fired emergency generator rated at 350 kW.  
            Added two Diesel fuel-fired emergency generators rated at 600 kW or less.  
            Added three Diesel fuel-fired emergency generators rated at 1,230 kW each and one rated at 1,000 KW.  
            Added nine small welding shops  
            Added three fuel storage tanks
- T37:     Added one Diesel fuel-fired peak shaver/emergency generators (Zone A total 2700 kW)  
            Added four Diesel fuel-fired emergency generators (total 281 kW)

Removal of three Diesel fuel-fired peak shaver /emergency generators (Zone A total 2550 kW)  
 Added small welding operations (Zones A and B)  
 Added twenty natural gas-fired boilers and water heaters with a total heat input of 19.75 mmBtu/hr

- T38: Added five Diesel fuel-fired emergency generators rated at 150 kW or less  
 Added three Diesel fuel-fired emergency generators rated at 1250 kW, 800 kW and 45 kW, respectively  
 Added fifty-one natural gas-fired boilers/heaters with a total heat input of 41.26 mmBtu/hour.  
 Added one JP-8 fuel storage tank
- T39: Removed five Diesel fuel-fired emergency generators for the site rated at 200 kW, 200 kW, 100 kW, 1500 kW, and 60 kW.  
 Removed one Outboard Engine Test Stand from the site.  
 Remove one boiler ID No. ES-646B from the site 1.5 mmBtu per hour heat input.  
 Added five Diesel fuel-fired emergency generators and fire pumps rated at 1230 kW, 750 kW, 450 kW, 42 kW, and 35 kW.  
 Added 35 natural gas-fired boilers and hot water heaters with a maximum total heat input of 21.045 mmBtu/hr  
 Added two above ground horizontal storage tanks [5000 gallon JP-8 fuel capacity and 2000 gallon Gasoline fuel capacity]
- T40: Added 39 natural gas-fired boilers and hot water heaters with a maximum total heat input of 38.0 mmBtu/hr  
 Added four No. 2 fuel oil-fired boilers and hot water heaters with a maximum total heat input of 2.73 mmBtu/hr
- T41: Removed two small emergency generators one at 250 kW and one at 100 kW.  
 Removed three small natural gas-fired hot water heaters.  
 Added five Diesel fuel-fired emergency generators with outputs of 1000 kW, 655 kW, 655 kW, 100 kW and 100 kW.  
 Added 39 small natural gas-fired boilers with a total maximum heat input of approximately 36 mmBtu per hour.
- T42: Removed eighteen small natural gas-fired five boilers with a maximum total of approximately 50 mmBtu per hour heat input from the site.  
 Removed ten Diesel fuel-fired emergency generators from the site.  
 Removed one welding shop from the site  
 Removed one air stripper from the site  
 Added 21 natural gas-fired boiler with a maximum total heat input of 25 mmBtu per hour.  
 Added one No. 2 fuel oil-fired boiler with a maximum total heat input of 10 mmBtu per hour.  
 Added three Diesel fuel-fired emergency generators 100 kW each.  
 Added one welding shop and one soldering shop
- T43: Renewal application with not new emissions sources added.

The current DAQ policy is to exclude hot water heaters less than 240 gallons and comfort heaters less than 0.2 mmBtu/hour heat input in the toxics evaluation.

The emission rates of toxic air pollutants from the proposed each of the modifications at the Fort Bragg military facility in Cumberland County have been reviewed by the DAQ. As stated earlier in this review, Fort Bragg modeled facility wide for the toxic air pollutants at this facility in 2012.

The North Carolina Division of Air Quality's air toxics program is a "risk-based" regulatory program designed to protect the public health by limiting emissions of toxic air pollutants from man-made sources. Air toxic pollutants emitted from this facility were evaluated using dispersion modeling. The model did demonstrate



compliance on a source by source basis with the AAL. Since the 2012 submittal, the Exemptions under 15A NCAC 02D .0702 were amended to include categorical exemptions for sources subject to a MACT standards. With the exemption, TAP limits can be removed from the permit provided there is no unacceptable health risk.

The DAQ has concluded that the modifications undertaken at the facility since the last modeling demonstration are not expected to result in an unacceptable health risk due to TAP emissions.

#### **VIII. Other Regulatory Requirements**

- An application fee of \$929.00 is required and was included with the application package.
- The appropriate number of application copies was received on October 27, 2017.
- A Professional Engineer's Seal is not required for this application.
- Ft. Bragg is located on Federal property and is therefore not subject to local zoning regulations. All of the proposed modifications have been approved by the installation planning and development authority and are in accordance with the Post master plan.
- Public notice is required for this significant modification under 15A NCAC 02Q .0501(d)(1).
- IBEAM Title V Equipment Editor (TVEE) update was verified on **XXXXX**.
- According to the application, the facility does not handle any of the substances subject to 112(r).
- The application was signed by Ms. Monica Stephenson, Director of Public Works, on October 23, 2017.

#### **IX. Draft/Proposed Permit Review Summary**

- Mr. Greg Reeves (FRO) was provided a draft permit for review on April 2, 2018. Mr. Reeves responded with minor comments on April 4, 2018. All comments have been addressed.
- Mr. Gary Cullen (Ft. Bragg) was provided a draft permit for review on April 2, 2018. Mr. Cullen responded with minor comments on April 9, 2018. All comments have been addressed.
- NCDAQ published a Public Notice of the proposed Title V permit revision on DAQ website on XXXX.
- EPA, Region 4 was provided a draft permit for review on XXXX.

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 02Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Consistent with 15A NCAC 02Q .0525, the EPA will have a concurrent 45-day review period. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 02Q .0522, a copy of each permit application, each proposed permit and each final permit pursuant shall be provided to EPA. Also, pursuant to 02Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice is provided to the public under 02Q .0521 above.

#### **X. Recommendations**

This permit application has been reviewed by the Division of Air Quality to determine compliance with all procedures and requirements. The Division has determined that this facility is expected to achieve compliance as specified in the permit with all applicable requirements. The Division will make its recommendation following the EPA review period.

ATTACHMENT 1 - SOURCES DELETED FROM PERMIT

**FORMs A2, A3**  
**EMISSION SOURCE LISTING FOR THIS APPLICATION - A2**  
**112r APPLICABILITY INFORMATION - A3**

REVISED 09/22/16

NCDEQ/Division of Air Quality - Application for Air Permit to Construct/Operate

**A2**

<b>EMISSION SOURCE LISTING: New, Modified, Previously Unpermitted, Replaced, Deleted</b>			
EMISSION SOURCE ID NO.	EMISSION SOURCE DESCRIPTION	CONTROL DEVICE ID NO.	CONTROL DEVICE DESCRIPTION
<b>Equipment To Be ADDED By This Application (New, Previously Unpermitted, or Replacement)</b>			
ES-914B	2.0 MMBtu/hr, natural gas-fired boiler	N/A	N/A
ES-915B	2.0 MMBtu/hr, natural gas-fired boiler	N/A	N/A
ES-916B	2.07 MMBtu/hr, natural gas-fired boiler	N/A	N/A
ES-917B	1.75 MMBtu/hr, natural gas-fired boiler	N/A	N/A
ES-918B	1.75 MMBtu/hr, natural gas-fired boiler	N/A	N/A
ES-919B	2.06 MMBtu/hr, natural gas-fired boiler	N/A	N/A
ES-22FP019	117 kw, diesel-fired fire pump engine	N/A	N/A
ES-23FP019	64 kw, diesel-fired fire pump engine	N/A	N/A
ES-25FPW3396	134 kw, diesel-fired fire pump engine	N/A	N/A
<b>Existing Permitted Equipment To Be MODIFIED By This Application</b>			
ES-779B	2.0 MMBtu/hr, natural gas-fired boiler	N/A	N/A
<b>Equipment To Be DELETED By This Application</b>			
ES-116GI	35kW, diesel-fired emergency generator	N/A	N/A
ES-120GI	50kW, diesel-fired emergency generator	N/A	N/A
ES-141GI	500kW, diesel-fired emergency generator	N/A	N/A
ES-142GI	600kW, diesel-fired emergency generator	N/A	N/A
ES-152GI	500kW, diesel-fired emergency generator	N/A	N/A
ES-147GI	125kW, diesel-fired emergency generator	N/A	N/A
ES-132GI	150kW, diesel-fired emergency generator	N/A	N/A
ES-140GI	275kW, diesel-fired emergency generator	N/A	N/A
ES-124GI	60kW, diesel-fired emergency generator	N/A	N/A
ES-127GI	100kW, diesel-fired emergency generator	N/A	N/A
ES-133GI	150kW, diesel-fired emergency generator	N/A	N/A
ES-161GI	125kW, diesel-fired emergency generator	N/A	N/A
ES-109GI	80kW, diesel-fired emergency generator	N/A	N/A
ES-187GI	400kW, diesel-fired emergency generator	N/A	N/A
ES-144GI	150kW, diesel-fired emergency generator	N/A	N/A
ES-183GI	125kW, diesel-fired emergency generator	N/A	N/A
ES-121GI	50kW, diesel-fired emergency generator	N/A	N/A
ES-183GI	125kW, diesel-fired emergency generator	N/A	N/A
ES-148GI	125kW, diesel-fired emergency generator	N/A	N/A
ES-117GI	25kW, diesel-fired emergency generator	N/A	N/A
ES-122GI	50kW, diesel-fired emergency generator	N/A	N/A
ES-118GI	25kW, diesel-fired emergency generator	N/A	N/A
ES-113GI	7.5kW, diesel-fired emergency generator	N/A	N/A
ES-155GI	20kW, diesel-fired emergency generator	N/A	N/A
ES-156GI	20kW, diesel-fired emergency generator	N/A	N/A
ES-157GI	20kW, diesel-fired emergency generator	N/A	N/A
ES-153GI	100kW, diesel-fired emergency generator	N/A	N/A
ES-154GI	100kW, diesel-fired emergency generator	N/A	N/A
ES-95GI	100kW, diesel-fired emergency generator	N/A	N/A
ES-158GI	20kW, diesel-fired emergency generator	N/A	N/A
ES-100GI	100kW, diesel-fired emergency generator	N/A	N/A
ES-129GI	100kW, diesel-fired emergency generator	N/A	N/A
ES-182GI	750kW, diesel-fired emergency generator	N/A	N/A
ES-84GI	125kW, diesel-fired emergency generator	N/A	N/A
ES-83GI	125kW, diesel-fired emergency generator	N/A	N/A
ES-97GI	100kW, diesel-fired emergency generator	N/A	N/A
ES-86GI	125kW, diesel-fired emergency generator	N/A	N/A
ES-94GI	250kW, diesel-fired emergency generator	N/A	N/A
ES-96GI	100kW, diesel-fired emergency generator	N/A	N/A
ES-188GI	35kW, diesel-fired emergency generator	N/A	N/A
ES-93GI	100kW, diesel-fired emergency generator	N/A	N/A
ES-115GI	25kW, diesel-fired emergency generator	N/A	N/A
ES-108GI	80kW, diesel-fired emergency generator	N/A	N/A
ES-85GI	125kW, diesel-fired emergency generator	N/A	N/A
ES-745B	0.4 MMBtu/hr, natural gas-fired boiler - Not installed	N/A	N/A
ES-672B	1.3 MMBtu/hr, natural gas-fired boiler - Not installed	N/A	N/A
ES-744B	0.4 MMBtu/hr, natural gas-fired boiler - Not installed	N/A	N/A
ES-654B	0.2 MMBtu/hr, natural gas-fired hot water heater - Not installed	N/A	N/A
ES-659B	0.5 MMBtu/hr, natural gas-fired hot water heater - Not installed	N/A	N/A
ES-662B	0.45 MMBtu/hr, natural gas-fired boiler - Not installed	N/A	N/A

Equipment To Be DELETED By This Application			
ES-653B	0.45 MMBtu/hr, natural gas-fired boiler - Not installed	N/A	N/A
ES-660B	0.5 MMBtu/hr, natural gas-fired hot water heater - Not installed	N/A	N/A
ES-661B	0.45 MMBtu/hr, natural gas-fired boiler - Not installed	N/A	N/A
ES-902B	2.0 MMBtu/hr, natural gas-fired boiler - Not installed	N/A	N/A
ES-903B	2.0 MMBtu/hr, natural gas-fired boiler - Not installed	N/A	N/A
ES-29B	Natural gas/No. 2 fuel oil-fired boiler (72.3 million Btu per hour heat input capacity)	N/A	N/A
ES-190GI	Emergency generator	N/A	N/A
ES-198GI	600 kW, emergency generator	N/A	N/A
ES-90GI	200 kW, emergency generator	N/A	N/A
ES-113FPO19RSA	90 hp, diesel-fired fire pump engine	N/A	N/A
ES-12FPO19RSB	112 hp, diesel-fired fire pump engine	N/A	N/A
ES-10FPW3396	Diesel-fired fire pump engine - replaced by proposed ES-25FPW3396.	N/A	N/A
ES-825B	3.0 MMBtu/hr, natural gas and fuel oil-fired boiler	N/A	N/A
ES-08PSG	400 kW, emergency generator	N/A	N/A
IES-00B	2.5 MMBtu/hr fuel oil-fired boiler (E-1930)	N/A	N/A
IES-JSOC	One woodworking operation controlled by one cyclone	N/A	N/A
IES-12C	Paint bench at the MacRidge Triangle Compound	N/A	N/A
IES-00B	0.49 MMBtu/hr fuel oil-fired hot water heater (3-2042)	N/A	N/A
IES-00B	1.57 MMBtu/hr natural gas-fired boiler (717)	N/A	N/A
IES-00B	2.77 MMBtu/hr natural gas-fired boiler	N/A	N/A
IES-00B	0.84 MMBtu/hr natural gas-fired boiler	N/A	N/A
IES-00B	0.84 MMBtu/hr natural gas-fired boiler	N/A	N/A
IES-00B	0.84 MMBtu/hr natural gas-fired boiler	N/A	N/A
IES-00B	0.84 MMBtu/hr natural gas-fired boiler	N/A	N/A
IES-00B	0.53 MMBtu/hr natural gas-fired boiler	N/A	N/A
IES-00B	0.24 MMBtu/hr natural gas-fired boiler	N/A	N/A
IES-00B	0.24 MMBtu/hr natural gas-fired boiler	N/A	N/A
IES-00B	0.34 MMBtu/hr natural gas-fired boiler	N/A	N/A
IES-00B	2.46 MMBtu/hr natural gas-fired boiler	N/A	N/A
IES-00B	0.24 MMBtu/hr natural gas-fired boiler	N/A	N/A
IES-00B	0.03 MMBtu/hr natural gas-fired hot water heater - Not installed	N/A	N/A
IES-00B	0.03 MMBtu/hr natural gas-fired hot water heater - Not installed	N/A	N/A
IES-00B	0.03 MMBtu/hr natural gas-fired hot water heater - Not installed	N/A	N/A
IES-00B	0.03 MMBtu/hr natural gas-fired hot water heater - Not installed	N/A	N/A
IES-00B	0.12 MMBtu/hr natural gas-fired hot water heater - Not installed	N/A	N/A
ES-00B	0.12 MMBtu/hr natural gas-fired hot water heater - Not installed	N/A	N/A
ES-00B	0.03 MMBtu/hr natural gas-fired hot water heater - Not installed	N/A	N/A
ES-00B	0.9 MMBtu/hr natural gas-fired hot water heater - Not installed	N/A	N/A
ES-00B	0.9 MMBtu/hr natural gas-fired hot water heater - Not installed	N/A	N/A
ES-00B	0.9 MMBtu/hr natural gas-fired hot water heater - Not installed	N/A	N/A
ES-00B	0.9 MMBtu/hr natural gas-fired hot water heater - Not installed	N/A	N/A